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DEPARTMENT OF COMMERCE
BUREAU OF THE CENSUS
WASHINGTON

FOURTEENTH CENSUS OF THE UNITED STATES
MANUFACTURES: 1919

OILCLOTH AND LINOLEUM

Prepared under the supervision of EUGENE F. HARTLEY, Chief Statistician for Manufactures

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EXPLANATION OF TERMS.

Scope of censns.—Census statistics of manufactures are compiled primarily for the purpose of showing the absolute and relative magnitude of the different branches of industry covered and their growth or decline. Incidentally, the effort is made to present data throwing light upon character of ownership, size of establishments, and similar subjects. When use is made of the statistics for these purposes it is imperative that due attention be given to their limitations, particularly in connection with any attempt to derive from them figures purporting to show average wages, cost of production, or profits.

The census did not cover establishments which were idle during the entire year or for which products were valued at less than \$500, or the manufacturing done in educational, eleemosynary, and penal institutions.

Period covered.—The returns relate to the calendar year 1919, or the business year which corresponded most nearly to that calendar year, and cover a year's operations, except for establishments which began or discontinued business during the year.

The establishment.—As a rule, the term "establishment" represents a single plant or factory, but in some cases it represents two or more plants which were operated under a common ownership or for which one set of books of account was kept. If, however, the plants constituting an establishment as thus defined were not all located within the same city, county, or state, separate reports were secured in order that the figures for each plant might be included in the statistics for the city, county, or state in which it was located. In some instances separate reports were secured for different industries carried on in the same establishment.

Classification by industries.—The establishments were assigned to the several classes of industries according to their products of chief value. The products reported for a given industry may thus, on the one hand, include minor products different from those covered by the class designation, and, on the other hand, may not represent the total product covered by this designation, because some products of this class may be made in establishments in which it is not the product of chief value.

Influence of increased prices.—In comparing figures for cost of materials, value of products, and value added by manufacture in 1919 with the corresponding figures for earlier censuses, account should be taken of the general increase in the prices of commodities during recent years. To the extent to which this factor has been influential the figures fail to afford an exact measure of the increase in the volume of business.

Persons engaged in the industry.—The following general classes of persons engaged in the manufacturing industries were distinguished: (1) Proprietors and firm members, (2) salaried officers of corporations, (3) superintendents and managers, (4) clerks (including other subordinate salaried employees), and (5) wage earners.

The number of persons engaged in each industry, segregated by sex, and, in the case of wage earners, also by age (whether under 16 or 16 and over), was reported for a single representative day. The 15th of December was selected as representing for most industries normal conditions of employment, but where this date did not portray such conditions, an earlier date was requested.

In the case of employees other than wage earners the number thus reported for the representative date has been treated as equivalent to the average for the year, since the number of employees of this class does not ordinarily vary much from month to month. In the case of wage earners the average has been obtained in the manner explained in the next paragraph.

In addition to the more detailed report by sex and age of the number of wage earners on the representative date, a report was obtained of the number employed on the 15th of each month, by sex, without distinction of age. From these figures the average number of wage earners for the year has been calculated by dividing the sum of the numbers reported for the several months by 12. The importance of the industry as an employer of labor is believed to be more accurately measured by this average than by the number employed at any one time or on a given day.

The number of wage earners reported for the representative day, though given in certain tables for each separate industry, is not totaled for all industries combined, because, in view of the variations of date, such a total is not believed to be significant. It would involve more or less duplication of persons working in different industries at different times, would not represent the total number employed in all industries at any one time, and would give an undue weight to seasonal industries as compared with industries in continual operation.

In order to determine as nearly as possible the age distribution of the average number of wage earners for an industry, the per cent distribution by age of the wage earners for December 15, or the nearest representative day, has been calculated from the actual numbers reported for that date. The percentages thus obtained have been applied to the average number of wage earners for the year to determine the average numbers 16 years and over, and under 16, employed.

Salaries and wages.—Under these heads are given the total payments during the year for salaries and wages, respectively. The Census Bureau has not undertaken to calculate the average annual earnings of either salaried employees or wage earners. Such averages would possess little real value, because they would be based on the earnings of employees of both sexes, of all ages, and of widely varying degrees of skill. Furthermore, so far as wage earners are concerned, it would be impossible to calcu-

late accurately even so simple an average as this, since the number of wage earners fluctuates from month to month in every industry, and in some cases to a very great extent. The Census Bureau's figures for wage earners, as already explained, are averages based on the number employed on the 15th of each month, and while representing the number according to the pay rolls to whom wages were paid on that date, no doubt represent a larger number than would be required to perform the work in any industry if all were continuously employed during the year.

Prevailing hours of labor.—No attempt was made to ascertain the number of wage earners working a given number of hours per week. The inquiry called merely for the prevailing practice followed in each establishment. Occasional variations in hours in an establishment from one part of the year to another were disregarded, and no attention was paid to the fact that a few wage earners might have hours differing from those of the majority. All the wage earners of each establishment are therefore counted in the class within which the establishment itself falls. In most establishments, however, practically all the wage earners work the same number of hours, so that the figures give a substantially correct representation of the hours of labor.

Capital (amount actually invested).—The instructions on the schedule for securing data relating to capital were as follows:

"The answer should show the total amount of capital, both owned and borrowed, on the last day of the business year reported. All the items of fixed and live capital may be taken at the amounts carried on the books. If land or buildings are rented, that fact should be stated and no value given. If a part of the land or buildings is owned, the remainder being rented, that fact should be so stated and only the value of the owned property given. Do not include securities and loans representing investments in other enterprises."

These instructions were identical with those employed at the census of 1914 and 1909. The data compiled in respect to capital, however, at both censuses, as well as at all preceding censuses of manufactures, have been so defective as to be of little value except as indicating general conditions. In fact, it has been repeatedly recommended by the census authorities that this inquiry be omitted from the schedule. While there are some establishments whose accounting systems are such that an accurate return for capital could be made, this is not true of the great majority, and the figures therefore do not show the actual amount of capital invested.

Materials.—The statistics as to cost of materials relate to the materials used during the year, which may be more or less than the materials purchased during the year. The term "materials" covers fuel, rent of power and heat, mill supplies, and containers, as well as materials which form a constituent part of the product.

Rent and taxes.—The taxes include certain Federal taxes and state, county, and local taxes. Under "Federal taxes" there are included the internal revenue tax on manufactures (tobacco, beverages, etc.), excise taxes when included in values reported for products, corporation capital stock tax, and corporation income tax, but not the income tax for individuals and partners.

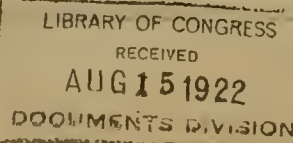
Value of products.—The amounts given under this heading represent the selling value or price at the factory of all products manufactured during the year, which may differ from the value of the products sold.

Value added by manufacture.—The value of products is not always a satisfactory measure of either the absolute or the relative importance of a given industry, because only a part of this value is actually created by the manufacturing processes carried on in the industry itself. Another part, and often by far the larger one, represents the value of the materials used. For many purposes, therefore, the best measure of the importance of an industry, from a manufacturing standpoint, is the value created by the manufacturing operations carried on within the industry. This value is calculated by deducting the cost of the materials used from the value of the products. The figure thus obtained is termed in the census reports "value added by manufacture."

Cost of manufacture and profits.—The census data do not show the entire cost of manufacture, and consequently can not be used for the calculation of profits. No account has been taken of depreciation or interest, rent of offices and buildings other than factory or works, insurance, ordinary repairs, advertising, and other sundry expenses.

Primary horsepower.—This item represents the total primary power equipment of the manufacturing establishments plus the amount of power, principally electric, rented from other concerns. It does not cover the power of electric motors taking their current from dynamos driven by primary power machines operated by the same establishment, because the inclusion of such power would obviously result in duplication. The figures for primary horsepower represent the rated capacity of the engines, motors, etc., and not the amount of power in actual daily use.

Fuel.—Statistics of the quantity of fuel used are shown only for anthracite and bituminous coal, coke, fuel oils, gasoline and other volatile oils, and gas, and represent the quantity used during the year. As only the principal kinds of fuel are shown, comparison as to the total cost of all fuel is impracticable.



OILCLOTH AND LINOLEUM.

By ARTHUR J. LECK.

GENERAL STATISTICS.

General character of the industry.—Most oilcloth and linoleum are built on a textile foundation or backing, such as unbleached cotton sheeting, drill, duck, burlap, or felt. These foundation materials are not made within this industry but are purchased, so that the process of manufacture becomes one of mixing and applying the ingredients, much of which is done by the use of special machinery.

Summary for the industry.—The general developments in the oilcloth and linoleum industry, during the 20 years since 1899, are summarized in Table 1. The two main divisions of the industry—"oilcloth and linoleum, floor," and "oilcloth, enameled"—are here presented both separately and combined.

Persons engaged in the industry.—Table 2 shows for 1919, 1914, and 1909 the number of persons engaged in the industry distributed by class and sex, the wage earners being grouped according to age—"16 years of age and over," and "under 16 years of age."

Wage earners, by months.—Table 3 shows the fluctuation by months in the number of wage earners employed in the industry on the 15th of each month during the years 1919 and 1914 for the United States, and for 1919 by states.

Prevailing hours of labor.—The tendency of this industry toward fewer working hours per week is evidenced by the statistics presented in Table 4. The

different schedules of time prevailing in the various states are also brought out by this table.

Size of establishments, by average number of wage earners.—The size of establishments for the combined industries as measured by the average number of wage earners is shown in Table 5 for the United States in 1919 and 1914, and by states in 1919.

Size of establishments, by value of products.—The decrease in the number of establishments having a small value of output and the increase in number having a large value is evidenced by the figures presented in Table 6. At the census of 1909 establishments ranging from \$100,000 to \$1,000,000 in value of product formed one group, while in 1914 and 1919 a division of this group was made in order to permit a more detailed analysis of the subject.

Character of ownership.—It is clearly shown in Table 7 that in 1919, 1914, and 1909 the corporate form of ownership predominated in the oilcloth and linoleum industry.

Number and horsepower of types of prime movers.—The various types of power used in 1919, 1914, and 1909 is shown in Table 8 for the industry as a whole and separately for the two branches, "oilcloth and linoleum, floor," and "oilcloth, enameled."

Fuel consumed.—Table 9 shows an increase from 1914 to 1919 in all kinds of fuel consumed with the exception of anthracite coal and manufactured gas.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, AND 1899.

	NUMBER OR AMOUNT.					PER CENT OF INCREASE. ¹			
	1919	1914	1909	1904	1899	1914-1919	1909-1914	1904-1909	1899-1904
OILCLOTH AND LINOLEUM.									
Number of establishments.....	32	31	31	27	27				
Persons engaged.....	7,573	6,234	5,557	4,112	3,409	21.5	12.2	35.1	20.6
Proprietors and firm members.....	7	7	11	12	26				
Salaries and wages.....	1,022	576	345	217	153	77.4	67.0	59.0	41.8
Wage earners (average number).....	6,544	5,651	5,201	3,883	3,230	15.8	8.7	33.9	20.2
Primary horsepower.....	28,010	22,272	16,125	10,112	7,561	25.8	38.1	59.5	33.7
Capital.....	\$60,586,645	\$28,041,178	\$19,634,138	\$13,803,232	\$8,879,102	116.1	42.8	42.2	55.5
Salaries and wages.....	9,902,300	4,149,632	3,474,628	2,304,987	1,922,636	138.6	19.4	50.7	19.9
Salaries.....	2,183,334	936,317	649,083	361,230	294,523	133.2	44.3	79.7	22.6
Wages.....	7,718,966	3,213,315	2,825,545	1,943,757	1,628,113	140.2	13.7	45.4	19.4
Paid for contract work.....	15,798		27,645	4,023					
Rent and taxes.....	2,361,313	114,805	74,449	249,369	238,004	1,956.8	54.2	50.8	29.9
Cost of materials.....	41,509,426	17,775,863	15,550,101	10,050,009	7,549,672	133.5	14.3	54.7	33.1
Value of products.....	68,110,081	25,598,361	23,339,022	14,792,246	11,402,620	166.1	9.7	57.8	29.7
Value added by manufacture ²	26,600,655	7,822,498	7,788,921	4,742,237	3,852,948	240.1	0.4	64.2	23.1

¹ A minus sign (—) denotes decrease; percentages are omitted where base is less than 100. ² Exclusive of internal revenue. ³ Value of products less cost of materials.

MANUFACTURES.

TABLE 1.—COMPARATIVE SUMMARY: 1919, 1914, 1909, 1904, AND 1899—Continued.

	NUMBER OR AMOUNT.					PER CENT OF INCREASE. ¹			
	1919	1914	1909	1904	1899	1914-1919	1909-1914	1904-1909	1899-1904
OILCLOTH AND LINOLEUM, FLOOR.									
Number of establishments.....	21	18	19	16	18				
Persons engaged.....	6,254	4,798	4,468	3,548	2,844	30.3	7.4	25.9	24.8
Proprietors and firm members.....	3	3	6	10	21				
Salaried employees.....	837	367	237	183	105	128.1	54.8	29.5	74.3
Wage earners (average number).....	5,414	4,428	4,225	3,355	2,718	22.3	4.8	25.9	23.4
Primary horsepower.....	23,509	18,782	14,158	8,703	6,421	25.2	32.7	62.7	35.5
Capital.....	\$49,803,688	\$20,292,210	\$14,721,702	\$10,108,107	\$7,176,198	145.4	37.8	45.6	40.9
Salaries and wages.....	8,297,546	3,204,608	2,750,367	2,020,089	1,521,174	158.9	16.5	36.2	32.8
Wages.....	1,779,457	600,240	440,963	300,151	193,939	196.5	36.1	46.9	54.8
Paid for contract work.....	6,518,089	2,604,368	2,309,404	1,719,938	1,327,235	150.3	12.8	34.3	29.6
Rent and taxes.....	8,298		27,645						
Cost of materials.....	2,124,077	79,801	53,517	23,708	23,978	2,561.7	49.1	58.8	5.4
Value of products.....	30,368,703	11,251,876	10,145,316	6,779,263	4,853,260	169.9	10.9	49.7	39.7
Value added by manufacture ²	52,673,206	17,602,336	15,813,331	10,388,237	7,807,105	199.2	11.3	52.2	33.1
Value added by manufacture ³	22,304,503	6,350,460	5,668,015	3,608,974	2,953,845	251.2	12.0	57.1	22.2
OILCLOTH, ENAMELED.									
Number of establishments.....	11	13	12	11	9				
Persons engaged.....	1,319	1,436	1,089	564	565	-8.1	31.9	93.1	-0.2
Proprietors and firm members.....	4	4	5	2	6				
Salaried employees.....	185	209	108	34	48	-11.5	93.5	217.6	-29.2
Wage earners (average number).....	1,130	1,223	976	528	512	-7.6	25.3	84.9	3.1
Primary horsepower.....	4,501	3,490	1,967	1,409	1,140	29.0	77.4	39.6	23.6
Capital.....	\$10,762,957	\$7,748,968	\$4,912,436	\$3,695,125	\$1,702,904	39.2	57.7	32.9	117.0
Salaries and wages.....	1,604,754	945,024	724,261	284,898	401,462	69.8	30.5	154.2	-29.0
Wages.....	403,877	336,077	208,120	61,079	100,584	20.2	61.5	240.7	-39.3
Paid for contract work.....	1,200,877	608,947	516,141	223,819	300,878	97.2	18.0	130.6	-25.6
Rent and taxes.....	7,500		20,932						
Cost of materials.....	237,236	35,004	35,004	20,932	26,026	577.7	67.2	33.7	159.9
Value of products.....	11,140,723	6,523,987	5,404,785	3,270,746	2,696,412	70.8	20.7	65.2	21.3
Value added by manufacture ²	15,436,875	7,996,025	7,525,691	4,404,009	3,595,515	93.1	6.2	70.9	22.5
Value added by manufacture ³	4,296,152	1,472,038	2,120,906	1,133,263	899,103	191.9	-30.6	87.2	26.0

¹ A minus sign (-) denotes decrease; percentages are omitted where base is less than 100. ² Exclusive of internal revenue. ³ Value of products less cost of materials.

TABLE 2.—PERSONS ENGAGED IN THE INDUSTRY: 1919, 1914, AND 1909.

CLASS.	Census year.	Total.	Male.	Fe-male.	PER CENT OF TOTAL.		CLASS.	Census year.	Total.	Male.	Fe-male.	PER CENT OF TOTAL.	
					Male.	Fe-male.						Male.	Fe-male.
OILCLOTH AND LINOLEUM.....	1919	7,573	6,915	658	91.3	8.7	Clerks and other subordinate salaried employees.	1919	640	415	225	64.8	35.2
	1914	6,234	5,946	288	95.4	4.6		1914	285	212	73	74.4	25.6
	1909	5,557	5,344	213	96.2	3.8		1909	161	135	26	83.9	16.1
Proprietors and officials.....	1919	261	260	1	99.6	0.4	Wage earners (average number).....	1919	5,414	5,123	291	94.6	5.4
	1914	132	132	.....	100.0	.....		1914	4,428	4,343	85	98.2	1.8
	1909	111	110	1	99.1	0.9		1909	4,225	4,115	110	97.4	2.6
Proprietors and firm members.....	1919	7	7	.....	100.0	.....	16 years of age and over.....	1919	5,391	5,102	289	94.6	5.4
	1914	7	7	.....	100.0	.....		1914	4,403	4,323	80	98.2	1.8
	1909	11	10	1	90.9	9.1		1909	4,193	4,083	110	97.4	2.6
Salaried officers of corporations.....	1919	66	66	.....	100.0	.....	Under 16 years of age.....	1919	23	21	2	91.3	8.7
	1914	52	52	.....	100.0	.....		1914	25	25	.....	100.0	.....
	1909	48	48	.....	100.0	.....		1909	32	32	.....	100.0	.....
Superintendents and managers.....	1919	188	187	1	99.5	0.5	OILCLOTH, ENAMELED.....	1919	1,319	1,177	142	89.2	10.8
	1914	73	73	.....	100.0	.....		1914	1,436	1,301	135	90.6	9.4
	1909	52	52	.....	100.0	.....		1909	1,089	1,013	76	93.0	7.0
Clerks and other subordinate salaried employees.	1919	768	508	260	66.1	33.9	Proprietors and officials.....	1919	61	60	1	98.4	1.6
	1914	451	335	116	74.3	25.7		1914	47	47	.....	100.0	.....
	1909	245	191	54	78.0	22.0		1909	29	29	.....	100.0	.....
Wage earners (average number).....	1919	6,544	6,147	397	93.9	6.1	Proprietors and firm members.....	1919	4	4	.....	100.0	.....
	1914	5,651	5,479	172	97.0	3.0		1914	4	4	.....	100.0	.....
	1909	5,201	5,043	158	97.0	3.0		1909	5	5	.....	100.0	.....
16 years of age and over.....	1919	6,508	6,121	387	94.1	5.9	Salaried officers of corporations.....	1919	15	15	.....	100.0	.....
	1914	5,600	5,438	162	97.1	2.9		1914	10	10	.....	100.0	.....
	1909	5,154	4,996	158	96.9	3.1		1909	10	10	.....	100.0	.....
Under 16 years of age.....	1919	36	26	10	72.2	27.8	Superintendents and managers.....	1919	42	41	1	97.6	2.4
	1914	51	41	10	80.4	19.6		1914	33	33	.....	100.0	.....
	1909	47	47	.....	100.0	.....		1909	14	14	.....	100.0	.....
OILCLOTH AND LINOLEUM, FLOOR.							Clerks and other subordinate salaried employees.	1919	128	93	35	72.7	27.3
	1914	4,798	4,645	153	96.8	3.2		1914	166	123	43	74.1	25.9
	1909	4,468	4,331	137	95.9	3.1		1909	84	56	28	66.7	33.3
Proprietors and officials.....	1919	200	200	.....	100.0	.....	Wage earners (average number).....	1919	1,130	1,024	106	90.6	9.4
	1914	85	85	.....	100.0	.....		1914	1,223	1,131	92	92.5	7.5
	1909	82	81	1	98.8	1.2		1909	976	928	48	95.1	4.9
Proprietors and firm members.....	1919	3	3	.....	100.0	.....	16 years of age and over.....	1919	1,117	1,019	98	91.2	8.8
	1914	3	3	.....	100.0	.....		1914	1,197	1,115	82	93.1	6.9
	1909	6	5	1	83.3	16.7		1909	961	913	48	95.0	5.0
Salaried officers of corporations.....	1919	51	51	.....	100.0	.....	Under 16 years of age.....	1919	13	5	8	38.5	61.5
	1914	42	42	.....	100.0	.....		1914	26	16	10	61.5	38.5
	1909	38	38	.....	100.0	.....		1909	15	15	.....	100.0	.....
Superintendents and managers.....	1919	146	146	100.0							
	1914	40	40	100.0							
	1909	38	38	100.0							

OILCLOTH AND LINOLEUM.

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TABLE 3.—WAGE EARNERS, BY MONTHS, FOR STATES: 1919.

[The month of maximum employment for each industry is indicated by bold-faced figures and that of minimum employment by *italic* figures.]

INDUSTRY AND STATE.	Average number employed during year.	NUMBER EMPLOYED ON 15TH DAY OF THE MONTH OR NEAREST REPRESENTATIVE DAY.												Per cent minimum is of maximum.
		January.	February.	March.	April.	May.	June.	July.	August.	September.	October.	November.	December.	
OILCLOTH AND LINOLEUM.														
United States:														
1919.....	6,544	5,132	4,945	4,950	5,537	6,237	6,813	7,022	7,279	7,438	7,629	7,684	7,862	62.9
Males.....	6,147	4,838	4,674	4,674	5,240	5,872	6,395	6,558	6,818	6,963	7,159	7,202	7,371	63.4
Females.....	397	294	271	276	297	365	418	464	461	475	470	482	491	55.2
1914.....	5,651	5,870	5,859	5,859	5,774	5,727	5,736	5,423	5,449	5,525	5,619	5,446	5,525	92.4
1909.....	5,201	5,083	5,110	5,100	5,057	5,133	5,158	5,169	5,221	5,282	5,351	5,321	5,435	93.0
Massachusetts.....	342	260	255	263	286	344	345	370	392	381	411	401	399	61.3
New Jersey.....	2,393	1,763	1,774	1,904	1,998	2,205	2,468	2,585	2,642	2,739	2,809	2,851	2,978	59.2
Pennsylvania.....	2,549	2,048	1,891	1,767	2,183	2,535	2,705	2,728	2,837	2,918	2,950	2,996	3,030	58.3
OILCLOTH AND LINOLEUM, FLOOR.														
United States:														
1919.....	5,414	4,260	4,065	4,030	4,518	5,117	5,655	5,825	6,061	6,189	6,328	6,381	6,539	61.6
Males.....	5,123	4,048	3,876	3,838	4,321	4,857	5,337	5,481	5,715	5,829	5,979	6,022	6,173	62.2
Females.....	291	212	189	192	197	260	318	344	346	360	349	359	366	51.6
1914.....	4,428	4,572	4,556	4,564	4,499	4,503	4,528	4,267	4,263	4,359	4,431	4,262	4,332	93.2
1909.....	4,225	4,101	4,141	4,113	4,092	4,200	4,209	4,211	4,266	4,307	4,354	4,297	4,414	92.7
New Jersey.....	2,136	1,544	1,544	1,668	1,746	1,956	2,218	2,338	2,397	2,464	2,539	2,558	2,660	58.0
Pennsylvania.....	2,549	2,048	1,891	1,767	2,183	2,535	2,705	2,728	2,837	2,918	2,950	2,996	3,030	58.3
OILCLOTH, ENAMELED.														
United States:														
1919.....	1,130	872	880	920	1,019	1,120	1,158	1,197	1,218	1,249	1,301	1,303	1,323	65.9
Males.....	1,024	790	798	836	919	1,015	1,058	1,077	1,103	1,134	1,180	1,180	1,198	65.9
Females.....	106	82	82	84	100	105	100	120	115	115	121	123	125	65.6
1914.....	1,223	1,298	1,303	1,295	1,275	1,224	1,208	1,156	1,186	1,166	1,188	1,184	1,193	88.7
1909.....	976	982	969	987	965	933	949	958	955	975	997	1,024	1,021	91.1
Massachusetts.....	342	260	252	263	286	344	345	370	392	381	411	401	399	61.3
New Jersey.....	257	219	230	236	252	249	250	247	245	275	270	293	318	68.9

TABLE 4.—AVERAGE NUMBER OF WAGE EARNERS, BY PREVAILING HOURS OF LABOR PER WEEK, FOR STATES: 1919 AND 1914.

STATE.	Census year.	Total.	IN ESTABLISHMENTS WHERE THE PREVAILING HOURS OF LABOR PER WEEK WERE—						
			44 and under.	Between 44 and 48.	48. ¹	Between 48 and 54.	54.	Between 54 and 60.	60.
United States.....	1919	6,544	27	7	225	1,877	1,753	2,286	369
	1914	5,651	(²)	(²)	6	524	767	3,012	1,342
	1909	5,201	(²)	(²)	14	16	370	2,074	2,727
Massachusetts.....	1919	342			104	154		84	
New Jersey.....	1919	2,393	27	7	121	1,059	502	677	
Pennsylvania.....	1919	2,549				555	469	1,525	

¹ Includes 48 and under for 1914 and 1909.² Corresponding figures not available.

TABLE 5.—SIZE OF ESTABLISHMENTS, BY AVERAGE NUMBER OF WAGE EARNERS, FOR STATES: 1919.

STATE.	TOTAL.		ESTABLISHMENTS EMPLOYING—															
	Establishments.	Wage earners (average number).	1 to 5 wage earners, inclusive.		6 to 20 wage earners, inclusive.		21 to 50 wage earners, inclusive.		51 to 100 wage earners, inclusive.		101 to 250 wage earners, inclusive.		251 to 500 wage earners, inclusive.		501 to 1,000 wage earners, inclusive.		Over 1,000 wage earners.	
			Establish- ments.	Wage earners.	Establish- ments.	Wage earners.	Establish- ments.	Wage earners.	Establish- ments.	Wage earners.	Establish- ments.	Wage earners.	Establish- ments.	Wage earners.	Establish- ments.	Wage earners.	Establish- ments.	Wage earners.
United States:																		
1919.....	32	6,544			4	53	5	162	5	422	10	1,354	4	1,580	3	1,969	1	1,004
1914.....	31	5,651	1	4	6	69	5	141	7	520	4	1,354 561	4	1,501	4	2,855		
Massachusetts.	4	342					1	22	1	84	2	236						
New Jersey.	14	2,393			1	7	3	105	1	74	7	970	1	324	1	913		
Pennsylvania.	5	2,549			1	20							1	469	2	1,056	1	1,004

MANUFACTURES.

TABLE 6.—SIZE OF ESTABLISHMENTS BY VALUE OF PRODUCTS: 1919, 1914, AND 1909.

VALUE OF PRODUCT.	NUMBER OF ESTABLISHMENTS.			AVERAGE NUMBER OF WAGE EARNERS.			VALUE OF PRODUCTS.			VALUE ADDED BY MANUFACTURE.		
	1919	1914	1909	1919	1914	1909	1919	1914	1909	1919	1914	1909
All classes.....	32	31	31	6,544	5,651	5,201	\$68,110,081	\$25,598,361	\$23,339,022	\$26,600,655	\$7,822,498	\$7,788,921
Less than \$100,000.....		7	4		92	49		274,700	255,940		83,446	(1)
\$100,000 to \$500,000.....	8	8	19	{ 178 }	983	1,358	{ 2,576,094	2,111,651 }	7,415,329	{ 765,590 }	1,924,286	(1)
\$500,000 to \$1,000,000.....	4	7		{ 389 }			{ 2,778,863	4,818,870 }		{ 887,797 }		
\$1,000,000 and over.....	20	9	8	5,977	4,576	3,784	62,755,121	18,393,140	15,667,753	24,947,268	5,814,766	(1)
PER CENT DISTRIBUTION.												
All classes.....	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	.....
Less than \$100,000.....		22.6	12.9		1.6	0.9		1.1	1.1		1.1	.....
\$100,000 to \$500,000.....	25.0	25.8	61.3	{ 2.7 }	17.4	26.3	{ 3.8	8.2 }	31.8	{ 2.9 }	24.6	.....
\$500,000 to \$1,000,000.....	12.5	22.6		{ 6.0 }			{ 4.1	18.8 }		{ 3.3 }		.....
\$1,000,000 and over.....	62.5	29.0	25.8	91.3	81.0	72.8	92.1	71.9	67.1	93.8	74.3	.....

¹ Figures not available.

TABLE 7.—CHARACTER OF OWNERSHIP: 1919.

CHARACTER OF OWNERSHIP.	Cen- sus year.	Num- ber of estab- lish- ments	WAGE EARNERS.		VALUE OF PRODUCTS.		CHARACTER OF OWNERSHIP.	Cen- sus year.	Num- ber of estab- lish- ments	WAGE EARNERS.		VALUE OF PRODUCTS.	
			Aver- age num- ber.	Per cent of total.	Amount.	Per cent of total.				Aver- age num- ber.	Per cent of total.	Amount.	Per cent of total.
All classes.....	1919	32	6,544	100.0	\$68,110,081	100.0	Corporations.....	1919	28	6,340	96.9	\$65,017,438	95.5
	1914	31	5,651	100.0	25,598,361	100.0		1914	27	5,491	97.2	24,487,014	93.7
	1909	31	5,201	100.0	23,333,022	100.0		1909	26	4,955	95.3	22,432,978	96.1
Individuals.....	1919	4	1,204	3.1	13,092,643	4.5							
	1914	4	1,160	2.8	11,111,347	4.3							
	1909	5	1,246	4.7	1,906,044	3.9							

¹ Includes two establishment in 1919 and 1914, and three in 1909 under "all others" to avoid disclosure of individual operations.

OILCLOTH AND LINOLEUM.

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TABLE 8.—NUMBER AND HORSEPOWER OF TYPES OF PRIME MOVERS: 1919, 1914, AND 1909.

POWER.	NUMBER OF ENGINES OR MOTORS.			HORSEPOWER.					
	1919	1914	1909	Amount.			Per cent distribution.		
				1919	1914	1909	1919	1914	1909
OILCLOTH AND LINOLEUM.									
Primary power, total.....	1,332	599	223	28,010	22,272	16,125	100.0	100.0	100.0
Owned.....	121	151	175	15,273	15,966	15,048	54.5	71.7	93.3
Steam.....	120	148	174	15,271	15,486	15,046	54.5	69.5	93.3
Engines.....	115	(2)	(2)	13,530	(2)	(2)	48.3		
Turbines.....	5	(2)	(2)	1,741	(2)	(2)	6.2		
Internal-combustion engines.....	1	3	1	2	480	2	(3)	2.2	(3)
Rented.....	1,211	448	48	12,737	6,306	1,077	45.5	28.3	6.7
Electric.....	1,211	448	48	12,487	6,306	1,002	44.6	28.3	6.2
Other.....				250		75	0.9		0.5
Electric.....	2,168	1,022	336	21,220	14,965	4,540	100.0	100.0	100.0
Rented.....	1,211	448	48	12,487	6,306	1,002	58.8	42.1	22.1
Generated by establishments reporting.....	957	574	288	8,733	8,659	3,538	41.2	57.9	77.9
OILCLOTH AND LINOLEUM, FLOOR.									
Primary power, total.....	886	438	175	23,509	18,782	14,158	100.0	100.0	100.0
Owned.....	113	124	142	14,323	13,521	13,333	60.9	72.0	94.2
Steam.....	112	124	141	14,321	13,521	13,331	60.9	72.0	94.2
Engines.....	108	(2)	(2)	12,655	(2)	(2)	53.8		
Turbines.....	4	(2)	(2)	1,666	(2)	(2)	7.1		
Internal-combustion engines.....	1		1	2		2	(2)		(2)
Rented.....	773	314	33	9,186	5,261	825	39.1	28.0	5.8
Electric.....	773	314	33	9,186	5,261	825	39.1	28.0	5.8
Electric.....	1,670	707	211	17,719	12,272	3,541	100.0	100.0	100.0
Rented.....	773	314	33	9,186	5,261	825	51.8	42.9	23.3
Generated by establishments reporting.....	897	393	178	8,533	7,011	2,716	48.2	57.1	76.7
OILCLOTH, ENAMELED.									
Primary power, total.....	446	161	48	4,501	3,490	1,967	100.0	100.0	100.0
Owned.....	8	27	33	950	2,445	1,715	21.1	70.1	87.2
Steam.....	8	24	33	950	1,965	1,715	21.1	56.3	87.2
Engines.....	7	(2)	(2)	875	(2)	(2)	19.4		
Turbines.....	1	(2)	(2)	75	(2)	(2)	1.7		
Internal-combustion engines.....		3			480			13.8	
Rented.....	438	134	15	3,551	1,045	252	78.9	29.9	12.8
Electric.....	438	134	15	3,301	1,045	177	73.3	29.9	9.0
Other.....				250		75	5.6		3.8
Electric.....	498	315	125	3,501	2,693	999	100.0	100.0	100.0
Rented.....	438	134	15	3,301	1,045	177	94.3	38.8	17.7
Generated by establishments reporting.....	60	181	110	200	1,648	822	5.7	61.2	82.3

¹ Figures for horsepower include for 1909 the amounts reported under the head of "other" owned power.² Not reported separately.³ Less than one-tenth of 1 per cent.

TABLE 9.—FUEL CONSUMED, BY STATES: 1919.

STATE.		COAL.		Coke (tons, 2,000 pounds).	Fuel oils (barrels).	Gasoline and other volatile oils (barrels).	Gas (1,000 cubic feet).
		Anthracite (tons, 2,240 pounds).	Bituminous (tons, 2,000 pounds).				
United States.....	1919	39,483	198,187	2,773	16,115	140	
	1914	43,673	176,825	625	828	(1)	1,215
Massachusetts.....			6,720				
New Jersey.....		20,663	77,543	1,263			
Pennsylvania.....			86,306	1,458	7,440	140	
All other states.....		18,820	27,618	52	8,675		

¹ Included with fuel oils in 1914.

MANUFACTURES.

SPECIAL STATISTICS.

The various kinds of products manufactured within the oilcloth and linoleum industry are accounted for in Table 10. Comparative quantities and values are given as far as possible for each product in 1909, 1914, and 1919, also the corresponding per cent of increase or decrease during the five-year period 1914-1919, and the 10-year period 1909-1919.

In 1919 there were 14 establishments in New Jersey, 5 in Pennsylvania, 4 in Massachusetts, 3 in Ohio, 2 in

Maine, 2 in New York, 1 in Illinois, and 1 in Indiana.

The artificial leather shown in Table 10 was a subsidiary product of establishments engaged primarily in the manufacture of oilcloth and linoleum. In addition, 17 establishments in 1919 included in the classification "Upholstering materials, not elsewhere specified" reported the production of artificial leather valued at \$26,281,966, compared with \$6,097,293 reported by 10 establishments in 1914.

TABLE 10.—DETAILED STATISTICS ON QUANTITY AND VALUE: 1919, 1914, AND 1909.

PRODUCT.	1919	1914	1909	PER CENT OF INCREASE. ¹		PRODUCT.	1919	1914	1909	PER CENT OF INCREASE. ¹	
				1914-1919	1909-1919					1914-1919	1909-1919
Total value.....	\$68,110,081	\$25,598,361	\$23,339,022	166.1	191.8	Floor covering (made on felt back):					
Oilcloth (made on cotton back):						Square yards.....	30,369,522	(2)	(2)		
Enameled—						Value.....	\$13,909,276	(2)	(2)		
Square yards.....	8,460,738	18,357,097	17,338,440	-53.9	-51.2	Artificial leather:					
Value.....	\$3,421,188	\$2,495,255	\$2,265,146	37.1	51.0	Pyroxylin coated textiles—					
Table, wall, shelf, and stair—						Square yards.....	3,332,085	(2)	(2)		
Square yards.....	39,132,641	59,358,872	61,168,777	-34.1	-36.0	Value.....	\$3,922,558	(2)	(2)		
Value.....	\$12,529,910	\$3,025,348	\$5,639,206	108.0	122.2	All other—					
Linoleum (made on jute back):						Square yards.....	10,300,416	(2)	(2)		
Linoleum, including cork carpet—						Value.....	\$4,821,190	(2)	(2)		
Square yards.....	22,098,136	33,306,669	26,215,979	-33.7	-15.7	All other products, value.....	\$2,048,914	\$2,308,485	\$4,589,742	-11.2	-55.4
Value.....	\$17,120,654	\$10,043,436	\$7,850,437	70.5	118.1						
Inlaid linoleum—											
Square yards.....	9,834,332	8,479,202	4,460,275	16.0	120.5						
Value.....	\$10,336,391	\$4,725,837	\$2,994,491	118.7	245.2						

¹ A minus sign (—) denotes decrease.

² Not reported separately.

GENERAL TABLES.

Table 11 gives, for 1919, 1914, and 1909, by states, the number of establishments, average number of wage earners, primary horsepower, wages, cost of materials, and value of products for the industry.

Table 12 presents, for 1919, statistics in detail for the industry as a whole, and for each state that can be shown separately without the possibility of disclosing the operations of individual establishments.

TABLE 11.—COMPARATIVE SUMMARY, BY STATES: 1919, 1914, AND 1909.

STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Expressed in thousands.			STATE.	Census year.	Number of establishments.	Wage earners (average number).	Primary horsepower.	Expressed in thousands.		
					Wages.	Cost of materials.	Value of products.						Wages.	Cost of materials.	Value of products.
United States.....	1919	32	6,544	28,010	\$7,719	\$41,509	\$68,110	Pennsylvania ²	1919	5	2,549	11,871	3,065	11,873	28,806
	1914	31	5,651	22,272	3,213	17,776	25,598		1914	5	1,803	9,554	1,072	4,647	7,165
	1909	31	5,201	16,125	2,826	15,550	23,339	All other states.....	1919	9	1,260	5,074	1,386	10,000	8,022
Massachusetts ¹	1919	4	342	1,361	325	4,341	5,747		1914	16	1,658	4,495	854	5,469	7,049
	1909	3	220	375	118	1,211	1,704		1909	18	2,858	7,931	1,521	7,701	11,492
New Jersey.....	1919	14	2,393	9,701	2,943	15,295	25,535								
	1914	10	2,190	8,223	1,287	7,660	11,384								
	1909	10	2,123	7,819	1,187	6,638	10,143								

¹ Not separately reported in 1911.

² Not separately reported in 1909.

OILCLOTH AND LINOLEUM.

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TABLE 12.—DETAILED STATEMENT, BY STATES: 1919.

INDUSTRY AND STATE.	Number of establishments.	PERSONS ENGAGED IN THE INDUSTRY.								WAGE EARNERS DEC. 15, OR NEAREST REPRESENTATIVE DAY.						EXPENSES.		
		Total.	Proprietors and firm members.	Salaried officers, superintendents, and managers.	Clerks, etc.		Wage earners.			16 and over.		Under 16.		Capital.	Salaries.			
					Male.	Female.	Average number.	Number, 15th day of—		Male.	Female.	Male.	Female.		Officials.	Clerks, etc.		
								Maximum month.	Minimum month.									
OILCLOTH AND LINOLEUM.																		
United States.....	32	7,573	7	254	508	260	6,544	De 7,862	Fe 4,674	7,789	7,308	440	29	12	\$60,586,645	\$1,152,348	\$1,030,986	
Massachusetts.....	4	375	.....	20	7	6	342	Oc 411	Fe 252	399	331	64	4	10	2,691,690	84,258	30,484
New Jersey.....	14	2,739	5	95	168	78	2,393	De 2,978	Se 1,763	2,978	2,886	69	23	.....	24,119,752	462,180	313,316
Pennsylvania.....	5	3,016	.....	102	220	145	2,549	De 3,030	Mh 1,767	2,954	2,790	160	2	2	21,255,523	423,850	467,375
All other states.....	9	1,443	2	37	113	31	1,260	.....	.....	1,458	1,301	157	.....	.....	12,519,680	182,060	219,811
OILCLOTH AND LINOLEUM, FLOOR.																		
United States.....	21	6,254	3	197	415	225	5,414	De 6,539	Mh 4,030	6,463	6,113	325	23	2	49,803,688	922,871	856,586	
New Jersey.....	10	2,419	1	71	143	68	2,136	De 2,660	Ja ¹ 1,544	2,660	2,573	66	21	.....	21,287,275	400,951	285,178
Pennsylvania.....	5	3,016	.....	102	220	145	2,549	De 3,030	Mh 1,767	2,954	2,790	160	2	2	21,255,523	423,850	467,375
All other states ²	6	819	2	24	52	12	729	.....	.....	849	750	99	.....	.....	7,260,890	98,070	104,033
OILCLOTH, ENAMELED.																		
United States.....	11	1,319	4	57	93	35	1,130	De 1,323	Ja 872	1,326	1,195	115	6	10	10,782,957	229,477	174,400	
Massachusetts.....	4	375	.....	20	7	6	342	Oc 411	Fe 252	399	331	54	4	10	2,691,690	84,258	30,484
New Jersey.....	4	320	4	24	25	10	257	De 318	Ja 219	318	313	3	2	.....	2,832,177	61,229	28,138
All other states ³	3	624	.....	13	61	19	531	.....	.....	609	551	58	.....	.....	5,258,790	83,990	115,778

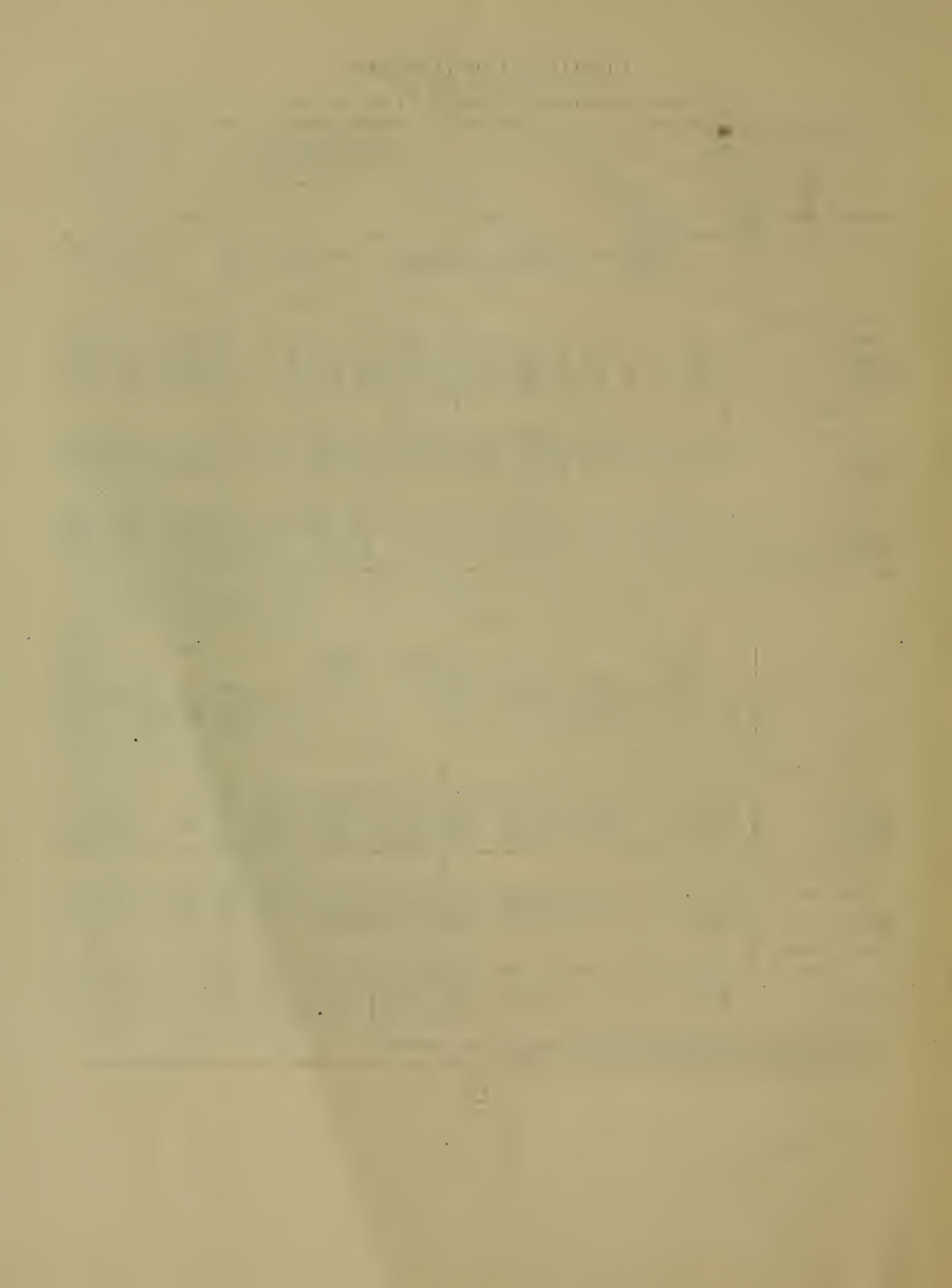
INDUSTRY AND STATE.	EXPENSES—continued.						Value of products.	Value added by manufacture.	POWER.							
	Wages.	For contract work.	Rent and taxes.		For materials.				Primary horsepower.					Electric horsepower generated in establishments reporting.		
			Rent of factory.	Taxes, Federal, state, county, and local.	Principal materials.	Fuel and rent of power.			Total.	Owned.			Rented. ⁴			
										Steam engines (not turbines).	Steam turbines.	Internal-combustion engines.				
OILCLOTH AND LINOLEUM.																
United States.....	\$7,718,966	\$15,798	\$8,321	\$2,352,992	\$39,892,145	\$1,617,281	\$68,110,081	\$26,600,655	28,010	13,530	1,741	2	12,737	8,733		
Massachusetts.....	324,758	7,500	.....	41,121	4,278,999	62,495	5,746,839	1,405,345	1,301	540	.....	.....	821	.....	
New Jersey.....	2,942,921	8,298	.....	1,350,049	14,712,001	582,881	25,534,739	10,239,862	9,704	5,640	1,375	.....	2,689	3,308		
Pennsylvania.....	3,064,992	.....	321	799,659	11,352,980	520,194	28,805,611	10,932,437	11,871	5,180	366	2	6,323	4,820		
All other states.....	1,386,295	8,000	.....	162,163	9,548,165	451,711	8,022,892	4,023,011	5,074	2,170	.....	.....	2,904	605		
OILCLOTH AND LINOLEUM, FLOOR.																
United States.....	6,518,089	8,298	321	2,123,756	29,020,819	1,347,884	52,673,206	22,304,503	23,509	12,655	1,666	2	9,186	8,533		
New Jersey.....	2,655,789	8,298	.....	1,224,144	12,244,798	539,193	21,688,734	8,904,743	8,844	5,480	1,300	.....	2,064	3,108		
Pennsylvania.....	3,064,992	.....	321	799,659	11,352,980	520,194	28,805,611	10,932,437	11,871	5,180	366	2	6,323	4,820		
All other states ²	797,308	.....	.....	99,953	5,423,011	288,497	2,178,861	2,467,323	2,794	1,995	.....	.....	799	605		
OILCLOTH, ENAMELED.																
United States.....	1,200,877	7,500	8,000	229,236	10,871,326	269,397	15,436,875	4,296,152	4,501	875	75	.....	3,551	200		
Massachusetts.....	324,758	7,500	.....	41,121	4,278,999	62,495	5,746,839	1,405,345	1,301	540	.....	.....	821	.....	
New Jersey.....	287,132	.....	.....	125,905	2,467,203	43,688	3,846,065	1,335,119	800	160	75	.....	625	200		
All other states ³	588,987	8,000	.....	62,210	4,125,124	163,214	5,844,031	1,555,688	2,280	175	.....	.....	2,105	.....	

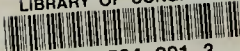
¹ Same number reported for one or more other months.

² All other states embrace: Illinois, 1 establishment; Indiana, 1; Maine, 1; New York, 1; and Ohio, 2.

³ All other states embrace: Maine, 1 establishment; New York, 1, and Ohio, 1.

⁴ Chiefly electric motors operated by rented (or purchased) current; other power included (chiefly shaft-belt or transmitted power from neighboring power plants).



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